



SKILLSHEET 12.2

Increase or decrease by a percentage

When asked to increase by a percentage we add the percentage to 100% before finding the total percentage of the quantity.

If decreasing by a percentage the method is similar except we subtract the percentage we are decreasing by from 100%.

WORKED EXAMPLE

A sports store buys softball bats for \$35 each and the mark-up on each bat is 40%. Calculate the selling price of the softball bats.

THINK

- 1 Add 40% to 100% to find the percentage that we are finding of \$35.
- 2 Divide 140 by 100 and then multiply by \$35.
- 3 Give a written answer.

WRITE

140% of \$35

$$= 140 \div 100 \times \$35$$

$$= \$49$$

The softball bats sell for \$49 each.

Try these

- 1 Calculate each of the following.
 - a Increase \$380 by 5%.
 - b Increase \$850 by 12%.
 - c Increase \$85 by 65%.
 - d Increase \$750 by 2.5%.
- 2 Calculate each of the following.
 - a Decrease \$150 by 5%.
 - b Decrease \$386 by 40%.
 - c Decrease \$1250 by 90%.
 - d Decrease \$75 by 1%.
- 3 A drill set sells at the hardware store for \$136. The price is then increased by 8%. Calculate the new price of the drill set.
- 4 A motel room is advertised at \$120 per night. A 12% surcharge is added on weekends. Calculate the cost per night of the motel on weekends.
- 5 Kristen receives \$430 per week in her job as a secretary. She pays 25% of this in tax. Calculate the amount of money that Kristen has left in her pay packet after tax has been deducted.
- 6 The cost of a restaurant bill has been reduced by 7.5% due to poor service. If the original bill was \$98.50, calculate the amount to be paid.

SKILLSHEET — ANSWERS

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|--------------|------------|------------|------------|
| 1 a \$399 | b \$952 | c \$140.25 | d \$768.75 |
| 2 a \$142.50 | b \$231.60 | c \$125 | d \$74.25 |
| 3 \$146.88 | 4 \$134.40 | 5 \$322.50 | 6 \$91.11 |